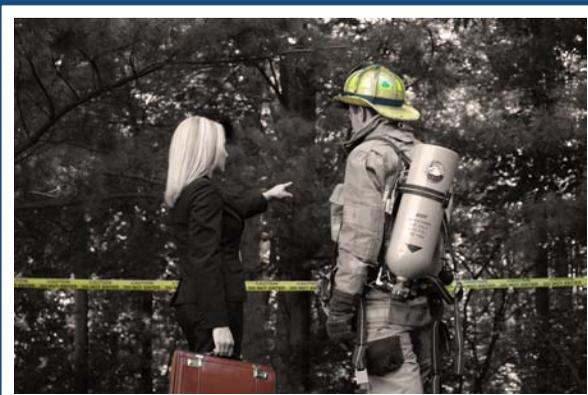


Our Mission

For more than 10 years, we at Combustion Science & Engineering, Inc. (CSE) have been dedicated to the study, advancement, and application of combustion and fire sciences. Combining a wealth of knowledge and experience, from the private to the public sector, from academia to industry, our spirited partnership and dedicated team offer exceptional technical leadership, superior investigations, and intelligent solutions.



The CSE Team



CSE is a company dedicated to the study, advancement, and application of the combustion and fire sciences. Our corporate capabilities include extensive experience in applying scientific and engineering principles to the analysis of fire and combustion. CSE's team includes degrees in Chemistry, Toxicology, and Chemical, Aerospace, Mechanical, and Fire Protection Engineering. CSE offers our clients more than a decade of experience in developing and managing programs for research, development, design, and analysis of a wide array of problems in fire protection and combustion science.

CSE is a leader in innovative research and development in the fields of fire safety and combustion design. CSE team members have received numerous acclamations for their innovative R&D in fire protection (multiple Bigglestone Awards and Carey Awards) and in combustion (Best Paper Awards from ASME/IGTI and the Pittsburgh Coal Conference). In addition, CSE team members hold or have pending more than 10 US patents (and many international patents) for practical innovations in fire safety and combustion design.

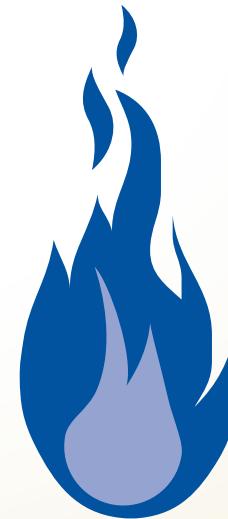
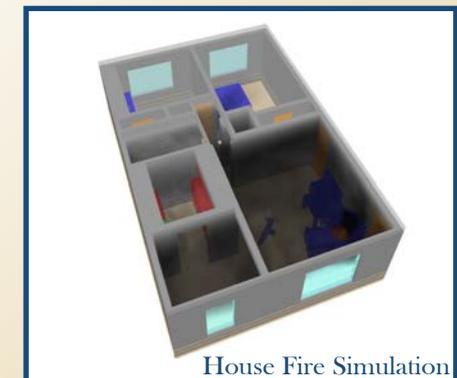
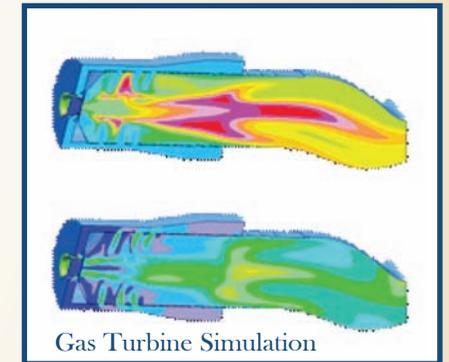
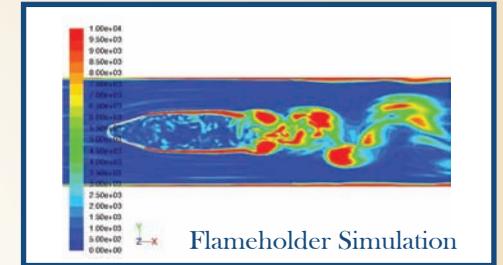
CONTACT OUR TEAM TODAY

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info@csefire.com • www.csefire.com

Applying the principles of science and engineering to
the solution of problems in combustion and fire



CFD Capabilities



Combustion
Science & Engineering, Inc.

Fire Protection Engineering



We provide our clients with highly proficient fire protection engineering services. CSE brings its state-of-the-art capabilities to the traditional fire protection engineering disciplines of active and passive fire protection design, smoke control and management, fire dynamics and modeling, human behavior, and risk analysis. Our superior staff of PhD and Master's level fire protection, chemical, and mechanical engineers have extensive design experience in all aspects of fire safety including

- Fire Protection R&D
- Computer Fire Modeling
- Fire Protection Design Services
- Performance-Based Code Compliance
- Chemical and Industrial Process Hazard Analysis
- Nuclear Fire Protection



Combustion System Design and Analysis

CSE has led or assisted in the design and analysis of numerous combustion systems for increased performance and reduced emissions. Our engineers have performed analyses of all components that impact the performance of a combustor, including premixers, transition pieces, and cooling systems. CSE has completed combustor designs for both traditional applications such as stationary gas turbines, as well as for non-standard situations such as exotic fuels, ultra-high pressures, remote locations, etc. At CSE, our personnel use both fundamental and practical engineering knowledge in their analyses of the fluid mechanics, chemical kinetics, thermodynamics, and heat transfer occurring in combustion systems. Our engineers have extensive capabilities in both experimental and analytical aspects of combustion and heat transfer, and are equipped with state-of-the-art facilities and resources to perform their experimental and computational analyses. CSE provides a wide array of combustion system design and analysis including

- Combustion R & D
- Reacting Flow CFD Modeling
- Development of Analytical Tools
- Modeling Analysis of Advanced Energy Systems



Fire and Explosion Investigation and Reconstruction

At CSE, we offer our clients expert and thorough investigation and analysis of fire and explosion incidents. Using scientific and engineering principles along with a systematic approach, CSE is able to provide sound origin and cause determinations and detailed analyses of fire and smoke spread. CSE is a recognized leader in the development and use of Computational Fluid Dynamics (CFD) models for the analysis of building fires and in the application of fire victim toxicology for cause and origin analysis. We offer a range of services including

- Fire and Explosion Investigation
- Fire Hazard and Code Analyses
- Fire and Explosion Reconstruction
- Fire Modeling and Analysis
- Material Characterization and Product Liability
- Expert Witness Services
- Evidence Storage and Inspection
- Fire Death and Injury Analyses
- Fire Victim Toxicology

CSE has a wide array of flow reactors, burners, and combustion systems available for use in experimental analyses, including those for atmospheric and high pressure operation.

Fire and Materials Lab

CSE has a variety of test apparatus for fire and materials characterization including fabric & textile testing abilities, materials testing abilities and fire reconstruction facilities. CSE has a full array of analytical equipment to encompass all of our clients' testing needs.

Evidence Inspection Storage and Testing Facility

CSE's on-site facilities and equipment allow us to host detailed evidence inspections for our clients. Equipment available for inspections includes photographic and videographic recording, microscopes, and on-site machining capabilities.

Our Facilities

Combustion Laboratory

CSE has the extensive experience and expertise, along with the necessary facilities, to test, develop, and quantify the performance of combustion and flow systems. With well over one hundred years of combined experience in experimental combustion, heat transfer, and fluid mechanics, CSE personnel have studied a multitude of different combustion, fire, and flow systems.

For more information, please contact one of our engineers at 410-884-3266

